



**UNITED STATES AIR FORCE
JOINT BASE ELMENDORF-RICHARDSON
ALASKA**

ENVIRONMENTAL RESTORATION PROGRAM

**RECORD OF DECISION
SS090 – BARRACKS CONSTRUCTION DIELDRIN
SPILL SITE**

FINAL

APRIL 2017

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RECORD OF DECISION
SS090 – BARRACKS CONSTRUCTION DIELDRIN SPILL SITE
JOINT BASE ELMENDORF-RICHARDSON, ALASKA

Prepared by
Air Force Civil Engineer Center

APRIL 2017

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LIST OF ABBREVIATIONS AND ACRONYMS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
ARAR	applicable or relevant and appropriate requirement
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR	Code of Federal Regulations
COC	chemical of concern
EPA	United States Environmental Protection Agency
EPC	exposure point concentration
FS	feasibility study
HDPE	high density polyethylene
IRA	interim remedial action
JBER	Joint Base Elmendorf-Richardson
JBER-E	former Elmendorf Air Force Base
JBER-R	former Fort Richardson Army Post
LUC	land use control
mg/kg	milligram(s) per kilogram
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
PSE	preliminary source evaluation
RAO	remedial action objective
RCRA	Resource Conservation and Recovery Act
ROD	record of decision
RSL	regional screening level
USAF	United States Air Force
U.S.C.	United States Code
UU/UE	unlimited use and unrestricted exposure

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1.0 DECLARATION

1.1 Site Name and Location

Facility Name: Joint Base Elmendorf-Richardson (JBER)

Site Location: Anchorage, Alaska. Latitude: 61.254693, Longitude: -149.684193

EPA ID: AK6214522157 (Fort Richardson)

Site Name: SS090 Barracks Construction Dieldrin Spill Site

Alaska Department of Environmental Conservation (ADEC) Hazard ID: 26005

1.2 Statement of Basis and Purpose

This decision document presents the selected remedy for SS090 at JBER, Anchorage, Alaska (location shown on Figures 1a and 1b; figures can be found at the end of this document). The selected remedy was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986, and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the information contained in the administrative record for the site.

This document is issued by the United States Air Force (USAF), as the lead agency, and the United States Environmental Protection Agency (EPA). Alaska Department of Environmental Conservation (ADEC) concurs with the selected remedy. This decision complies with Title 40 of the Code of Federal Regulations (CFR) Part 300.

1.3 Assessment of Site

The response action selected in this Record of Decision (ROD) is necessary to protect public health or welfare from actual or threatened releases of hazardous substances into the environment.

1.4 Description of Selected Remedy

The contaminant of concern at SS090 is dieldrin in soil. The associated cleanup level is the 18 AAC 75 human health cleanup level of 0.44 mg/kg (ADEC, 2016).

The selected remedy for soil at SS090 includes the following major components:

- Maintenance of the soil cap (45 feet in diameter by approximately 6 feet high), topped with a minimum of 3 inches of soil and vegetated for erosion control
- Maintenance of the asphalt parking lot within the land use control boundary
- Institutional controls (ICs)

In 2008, an interim remedial action (IRA) was completed during construction of the adjacent barracks and parking area because concentrations of dieldrin in soil posed potential risk to onsite workers and potential future residents from direct contact. Soil with low levels of dieldrin that was below the 18 AAC 75 (2008) migration to groundwater cleanup level of 0.0076 milligrams per

kilogram (mg/kg) was consolidated into an approximately 5- to 6-foot-high by 45-foot-wide circular mound, covered with two layers of high density polyethylene (HDPE) and a layer of geotextile fabric, and topped with approximately 3 inches of top soil, creating a raised bed (cap). This cap was constructed on top of an area with dieldrin in soil at concentrations above the 18 AAC 75 (2008) direct contact cleanup level of 0.32 mg/kg (up to 1.7 mg/kg). Figure 2 shows the concentrations of dieldrin in soil beneath the ground surface. Figure 3 presents a cross section of the raised bed.

SS090 cannot support unlimited use and unrestricted exposure due to dieldrin remaining in soil after implementation of the selected remedy. Land use restrictions are required as part of this response action and will be achieved through imposition of land use controls (LUCs) in the form of institutional controls (ICs) that limit the use and/or exposure to those areas of the property that are contaminated. Maintenance of the cap will include performing annual inspections, repairing damage, and maintaining the asphalt, top soil, native grasses, HDPE, and geotextile fabric, as needed. ICs will continue to restrict soil excavation and transport of materials offsite, prevent activities that could affect the performance of the cap, and prevent or control human exposure to dieldrin in soil within the LUC boundary shown on Figure 2.

Principal threat wastes are defined by CERCLA as hazardous or highly toxic source materials that (1) result in ongoing contamination to surrounding media, (2) generally cannot be reliably contained, or (3) present a significant risk to human health or the environment should exposure occur. The remaining site contaminants at Site SS090 do not constitute principal threat wastes as defined by CERCLA.

The 18 AAC 75 dieldrin soil direct contact cleanup level (2008) has since been replaced by the human health cleanup level of 0.44 mg/kg as of November 6, 2016, which was selected as the final cleanup level in this document. The “human health” exposure pathway is the cumulative exposure pathway through dermal contact, ingestion, and inhalation of volatile compounds from hazardous substances in the water.

1.5 Statutory Determinations

The selected remedy for SS090 is protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to the remedial action, is cost effective, and uses permanent solutions and alternative treatment technologies to the maximum extent practicable.

The selected remedy represents the maximum extent to which permanent solutions can be used in a practicable manner at the site. It provides the best balance or trade-offs in terms of balancing criteria while also considering the bias against disposal of hazardous substances or contaminated materials without treatment and considering state and community acceptance.

The NCP establishes the expectation that treatment will be used to address the principal threats posed by a site whenever practicable (40 CFR 300.430[a] [1] [iii] [A]). While the selected remedy does not address the preference for treatment that permanently and significantly reduces the volume, toxicity, or mobility of hazardous wastes as a principal element, none of the alternatives

include treatment of soil, and the immediate or future need for active remediation at the site is not warranted for the following reasons:

- The site is located in a parking area near an intersection, and current land use is not expected to change in the foreseeable future.
- Dieldrin in soil is not migrating to groundwater.

Because this remedy results in hazardous substances remaining onsite at concentrations greater than levels that allow for UU/UE, a statutory review will be conducted within five years after initiation of remedial action to ensure that the remedy is, or will be, protective of human health and the environment

1.6 Data Certification Checklist

The following information is included in the Decision Summary section of this ROD (Section 2) (additional information can be found in the administrative record for SS090, Fort Richardson, Alaska:

- Chemicals of concern (COCs) and their respective concentrations (42 United States Code [U.S.C.] Section 9620(a)(4)) (see Section 2.5.5)
- Baseline risk represented by the COCs (see Section 2.7)
- Cleanup levels established for COCs and the basis for these levels (see Section 2.8)
- Principal threat wastes (see Section 2.11)
- Current and reasonably anticipated future land use assumptions and current and future beneficial uses of groundwater (see Section 2.6)
- Potential land use that will be available at the site as a result of the selected remedy (see Section 2.12.4)
- Estimated capital costs, annual operation and maintenance costs, and total present worth costs; discount rate; and number of years over which the remedy cost estimate is projected (see Section 2.10.7)
- Key factors that led to selecting the remedy (see Section 2.12.1)

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1.7 Authorizing Signature

This signature documents United States Air Force approval of the remedy selected in this Record of Decision for SS090 – Barracks Construction Dieldrin Spill Site, JBER, Anchorage, Alaska.



SUZANNE W. BILBREY, P.E., GS-15, DAF
Director, Environmental Management Directorate
Air Force Civil Engineer Center
United States Air Force

31 Jul 2017
Date

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1.7 Authorizing Signature

This signature documents United States Environmental Protection Agency approval of the remedy selected in this Record of Decision for SS090 – Barracks Construction Dieldrin Spill Site, JBER, Anchorage, Alaska.



SHERYL BILBREY

Director

United States Environmental Protection Agency Region 10
Office of Environmental Cleanup

Date

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1.7 Authorizing Signature

This signature documents Alaska Department of Environmental Conservation concurrence with the remedy selected in this Record of Decision for SS090 – Barracks Construction Dieldrin Spill Site, JBER, Anchorage, Alaska.



KIMBERLY DERUYTER
DSMOA Section Manager
Federal Facilities Section
Contaminated Sites Program
Alaska Department of Environmental Conservation



Date

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2.0 DECISION SUMMARY

This decision summary provides a description of the SS090 Barracks Construction Dieldrin Spill Site (SS090), identifies the Selected Remedy, and provides a substantive summary of the Administrative Record file that supports the remedy selection decision.

2.1 Site Name, Location, and Description

JBER comprises the former Elmendorf Air Force Base (JBER-E) and former Fort Richardson Army Post (JBER-R), and encompasses 74,000 acres adjacent to the Municipality of Anchorage, Alaska (Figure 1a). As a result of the 2005 Department of Defense Base Realignment and Closure Commission recommendations, JBER-E and JBER-R merged to form JBER on October 1, 2010.

SS090 is located at the intersection of 6th and A Streets on JBER-R. The site is the location of a historical dieldrin surface spill and currently consists of a raised vegetated bed and a parking lot for the adjacent barracks (see Figure 1b).

Prior to the construction of the parking lot, the area consisted of a football field and recreational facilities. The origin of the dieldrin is believed to be from a small, localized spill or release from historical pesticide spraying or mixing on recreational facilities. Dieldrin is one of a number of pesticides that were historically applied at JBER.

The USAF has conducted environmental restoration at SS090 in accordance with CERCLA under the Defense Environmental Restoration Program, which was established by Section 211 of the Superfund Amendments and Reauthorization Act (SARA) of 1986. USAF actions also satisfy the requirements of Alaska laws concerning removal and remedial actions as required by CERCLA. The United States Environmental Protection Agency (EPA) and ADEC provide regulatory oversight of the environmental restoration actions, in accordance with CERCLA. The EPA ID associated with SS090 is AK6214522157 (Fort Richardson) and the ADEC Hazard ID is 26005.

2.2 Site History and Enforcement Activities

In 1994, JBER-R was placed on the National Priorities List, and the United States Army signed a Federal Facility Agreement with EPA and ADEC (DOD, 1994). As part of the formation of JBER, USAF assumed the responsibility to continue the cleanup of sites on JBER-R under this agreement.

This section provides background information and summarizes previous site investigations and response actions that led to this ROD.

2.2.1 Preliminary Assessment/Site Inspections

An investigation was conducted at and around SS090 between November 2005 and February 2006 in anticipation of the construction of new barracks. Sixty-eight test borings were drilled, and soil samples were collected and analyzed for gasoline-range organics; benzene, toluene, ethylbenzene, and xylenes; diesel-range organics; residual-range organics; volatile organic compounds; polycyclic aromatic hydrocarbons; polychlorinated biphenyls; pesticides; and Resource

Conservation and Recovery Act (RCRA) metals. Dieldrin was detected in one soil sample at a concentration of 1.32 mg/kg, between 0 and 4 feet below ground surface (bgs).

In 2007, five soil borings were advanced and 10 soil samples were collected from 0 to 6 feet bgs to confirm the presence of dieldrin and to assess the extent of contamination (United States Army Corps of Engineers, Alaska District [USACE], 2008). Dieldrin was detected in all 10 samples at concentrations ranging from 0.013 to 1.7 mg/kg.

In 2008, 11 soil borings were advanced and 36 soil samples were collected and analyzed for dieldrin from the surface to 20 feet bgs to define the extent of the soil contamination (USACE, 2008). The maximum concentration detected was 1.5 mg/kg in sample B6 at 3 to 6 feet bgs.

2.2.2 2008 Interim Remedial Action

An IRA was completed during construction of the adjacent barracks and parking area because concentrations of dieldrin in soil posed potential risk to onsite workers and potential future residents from direct contact. Soil with low levels of dieldrin above the 18 AAC 75 (2008) migration to groundwater cleanup level of 0.0076 mg/kg was consolidated into an approximately 5- to 6-foot-high by 45-foot-wide circular mound, covered with two layers of HDPE and a layer of geotextile fabric, and topped with approximately 3 inches of top soil, creating a raised bed (cap). This cap was constructed on top of an area with dieldrin in soil at concentrations above the 18 AAC 75 (2008) direct contact cleanup level (0.32 mg/kg). A cross section of the raised bed is presented as Figure 3.

The 18 AAC 75 dieldrin soil direct contact cleanup level (2008) has since been replaced by the human health exposure pathway cleanup level of 0.44 mg/kg as of November 6, 2016, which is the final cleanup level in this document. All soil that exceeds the human health cleanup level is below the ground surface, and is covered with an additional 5 to 6 feet of soil and a cap.

Interim land use restrictions – institutional controls were also implemented with the IRA to restrict soil excavation and transport of materials offsite. The LUCs were also designed to prevent activities that could affect the performance of the cap, to prevent or control receptor exposure to dieldrin in soil, and to protect human health and the environment.

2.2.3 2012 Investigation

In 2012, three soil samples were collected from three locations south of SS090, along A Street. The samples were collected from a depth of 5 to 15 feet bgs and were analyzed for dieldrin (USACE, 2012). These data were collected to determine whether dieldrin posed a risk to construction workers who would be installing utilities west of 6th Street. Dieldrin was not detected in any of the three samples.

2.2.4 2014 Preliminary Source Evaluation 2 Investigation

During the Preliminary Source Evaluation 2 (PSE 2) investigation in 2014, three groundwater monitoring wells were installed and samples collected and analyzed to determine whether pesticides had reached groundwater, and to evaluate potential risks to human health and the

environment. Neither dieldrin nor other pesticides were detected at concentrations above ADEC 18 AAC 75 (2012) Table C cleanup levels in the groundwater samples (USAF, 2014).

Based on the results, it was concluded that groundwater below the site is relatively deep (at approximately 75 feet), and that a competent confining unit overlying the aquifer is present. It is therefore unlikely that groundwater would be affected in the future.

2.2.5 Operations and Maintenance

In May 2014, damage to an approximately 10-foot-by-5-foot area of the cap was observed. In June 2014, a patch consisting of two layers of 10-mil HDPE and a thin layer of topsoil was placed over the raised bed. In September 2014, eight bollards were installed along the perimeter of the raised bed to prevent further damage to the cap.

In 2015, the entire raised bed was covered with approximately 6 to 12 inches of additional soil and re-seeded with native grasses for continued protection, for a total of 9 to 15 inches of soil on top of the HDPE layers.

2.3 Community Participation

NCP 40 CFR Section 300.430(f)(3) establishes a number of public participation activities that the lead agency must conduct following preparation of the Proposed Plan and review by the support agency. Components of these items and documentation of how each component was satisfied for SS090 are described in Tables 2-1 and 2-2.

Table 2-1: Public Notification of Document Availability

Requirement	Satisfied By
Notice of availability of the Proposed Plan Must be made in a general circulation major local newspaper.	Notice of availability was published in the <i>Alaska Dispatch News</i> , a newspaper of general circulation in Anchorage, Alaska, on July 20, 2016; in the <i>Alaska Star</i> , a weekly newspaper of circulation in Chugiak/Eagle River, Alaska on July 21, 2016; and in the <i>Arctic Warrior</i> , a weekly newspaper in circulation on JBER, Alaska on July 22, 2016.
<p>Notice of availability must include a brief abstract of the Proposed Plan, which describes the alternatives evaluated and identifies the preferred alternative (NCP Section 300.430(f)(3)(i)(A)).</p> <p>Notice of availability should consist of the following information:</p> <ul style="list-style-type: none"> • Site names and locations • Identification of lead and support agencies • Identification of preferred response action • Request for public comments • Public participation opportunities including: <ul style="list-style-type: none"> – Location of Information Repository and Administrative Record file – Methods by which the public may submit written and oral comments, including a contact person – Dates of public comment period 	The Notice of Availability included all of these components and is included for reference as Appendix A of this ROD.

Table 2-2: Public Comment Period Requirements

Requirement	Satisfied By
Lead agency should make document available to public for review on same date as newspaper notification.	Document was made available to the public on July 20, 2016. The notice of availability was first published on July 20, 2016.
Lead agency must ensure that all information that forms the basis for selecting the response action is included as part of the Administrative Record file and made available to the public during the public comment period.	All data collected and all CERCLA primary documents produced for the site are maintained as part of the Administrative Record file at the Information Repository at the Alaska Resources Library and Information Services (ARLIS) at the University of Alaska Consortium Library in Anchorage Alaska and online at http://afcec.publicadmin-record.us.af.mil (filed under Fort Richardson, Alaska), which are available to the public.
CERCLA Section 117(a)(2) requires the lead agency to provide the public with a reasonable opportunity to submit written and oral comments on the Proposed Plan. NCP Section 300.430(f)(3)(i) requires the lead agency to allow the public a minimum of 30 days to comment on the RI/FS and the Proposed Plan and other supporting information located in the Administrative Record and Information Repository.	The Air Force provided a public comment period for the Proposed Plan from August 1 through August 30, 2016.
The lead agency must extend the public comment period by at least 30 additional days upon timely request.	The Air Force did not receive any requests to extend the public comment period.

2.4 Scope and Role of Response Action

This ROD presents the selected final remedy for SS090 at JBER-R: maintenance of the existing cap and ICs. The USAF, in partnership with the EPA and ADEC, determined that further action is necessary for soil at SS090 because it is contaminated with dieldrin at concentrations above levels considered protective of human health. The response action at SS090 addressed all contaminated media (soil) and exposure pathways. No principal threat wastes are present at SS090.

The SS090 source area is not within a known Operable Unit, and is approximately 1,150 feet from the next closest contaminated site – Building 39600 (ADEC Hazard ID: 23424), where the primary contaminant of concern is petroleum, and not related to SS090.

2.5 Site Characteristics

The following sections describe the geology, hydrology, previous site characterization activities, and the nature and extent of contamination at SS090 at JBER-R. No areas of archaeological or historical importance have been identified at the site.

2.5.1 Physiography and Climate

Local and regional geographic features greatly affect climate in the JBER area. JBER is located in a semiarid area of South Central Alaska. Cook Inlet moderates the climate seasonally, and four surrounding mountain ranges protect the area from Gulf of Alaska storms and extreme winter temperatures from the northern Alaska interior. Typical summer temperatures range from 46 to 65 degrees Fahrenheit (°F), and winter temperatures range from 4 to 45°F; extreme temperatures range from -38 to 86°F. Average annual precipitation in the Anchorage area is 15 inches, with a

range from 13 to 20 inches. Most of the precipitation falls from July through September when the wind is from the southwest. Snowfall averages 66 inches per year, or about one-third (5.5 inches) of the total precipitation. The depth of snow on the ground does not normally exceed 24 inches.

2.5.2 Geology

The soils beneath SS090 consist mainly of grayish brown to grayish black sandy gravel, gravelly sand, and gravel, typical of glacial deposits in the area. A clay confining unit (known as the Bootlegger Cove Formation) is present beginning between approximately 60 to 64 feet bgs and ranges in thickness from 5 to 9 feet.

2.5.3 Hydrogeology

Groundwater is present in a confined aquifer below the confining unit. Groundwater has been encountered between 68 and 73 feet bgs. The local hydraulic gradient is 0.015 foot per foot, and flow is toward the northwest. No drinking water wells are located within 0.5 mile of SS090.

SS090 is not near any surface water bodies. The nearest surface water bodies are Ship Creek, which is located 1 mile south of the site, and Otter Lake, which is located 2.7 miles northwest of the site.

2.5.4 Previous Site Characterization Activities

Data characterizing soil and groundwater at SS090 were collected during several previous investigations from 2005 to 2014. A summary of the previous investigations is provided in Section 2.2. A detailed history is included in the PSE 2 (USAF, 2014) and the *Interim Remedial Action Summary Report (IRA)*, SS090 – Barracks Construction Dieldrin Spill Site, Joint Base Elmendorf-Richardson, Alaska (USAF, 2015).

2.5.5 Nature and Extent of Contamination

Dieldrin was detected in soil at concentrations up to 1.7 mg/kg. The maximum concentration was detected between 3 and 6 feet bgs (location B2). Soil sample results are presented on Figure 2. Dieldrin in soil at concentrations above the ADEC migration-to-groundwater cleanup level (0.00457 mg/kg) (ADEC, 2016) is in an approximately 4,400-square-foot area to a maximum depth of approximately 20 feet bgs. Soil with concentrations of dieldrin above the November 2015 EPA regional screening levels (RSLs) for residential land use (0.034 mg/kg) and industrial land use (0.14 mg/kg) (EPA, 2015), as well as the ADEC human health cleanup level (0.44 mg/kg), is below the ground surface and covered with an additional 5 to 6 feet of soil and a cap (the raised bed). The EPA RSLs and ADEC CULs are further discussed in Section 2.7.1 and presented in Table 2-3 below.

Neither dieldrin nor other pesticides were detected at concentrations above ADEC Table C cleanup levels (ADEC, 2016) in the groundwater samples collected in 2014. Based on these results, that groundwater below the site is relatively deep (at approximately 75 feet), and a competent confining unit overlying the aquifer is present, it is unlikely that groundwater will be affected in the future. Additionally, groundwater below the site is not used as a drinking water source; however, all groundwater in Alaska is considered a potential drinking water source.

Table 2-3: Comparison of Dieldrin Soil Concentrations with ADEC CULs and EPA RSLs

Chemical	Media/ Exposure Area	Group A EPC (mg/kg)	Group B EPC (mg/kg)	Screening Levels		
				ADEC Human Health Cleanup Level ^a (mg/kg)	EPA Residential RSL ^b (mg/kg)	EPA Industrial RSL ^b (mg/kg)
Dieldrin	Soil (0 to 15 feet bgs)	0.952	0.00624	0.44	0.034	0.14

^a 18 AAC 75ADEC Method Two human health soil cleanup level adopted on November 6, 2016 (ADEC, 2016), replaces the direct contact cleanup level (2008).

^b EPA RSLs are not cleanup levels or cleanup standards under CERCLA but may be used to support the decision to undertake a remedial action.

Note:

Bold = Selected as the cleanup level for dieldrin in soil at SS090.

2.6 Current and Potential Future Land and Resource Uses

JBER is a secured installation. Access to JBER is generally limited to military members, their dependents, and JBER civilian government employees. JBER is expected to remain an active military installation into the foreseeable future. The majority of the land currently used by the Air Force and the Army is on long-term withdrawal from the public domain and was originally assigned to the Bureau of Land Management (BLM). Residual responsibility for the lands remains with the BLM, which retains interest in the stewardship of the transferred parcel even though the land is under the Department of Defense's long-term management (USAF, 2011).

SS090 is located at the intersection of two roads, adjacent to a parking lot for an active barracks. The current land use and reasonably anticipated future land use for the site is a parking area.

2.7 Summary of Site Risks

As part of the PSE 2 (USAF, 2014) and IRA Summary (USAF, 2015) reports, a risk evaluation was conducted for SS090 to evaluate the current and potential future risks posed by dieldrin on human health and the environment. The risk evaluation was updated to use current 2016 CULs, and is discussed below.

2.7.1 Human Health Risk Assessment

A risk evaluation for soil was performed using exposure areas and exposure scenarios that reflect the current (industrial worker) and potential future land use (resident). The exposure areas in which individuals at SS090 might contact dieldrin include the following:

- Group A: soil from 0 to 15 feet bgs across the entire site (locations shown on Figure 2 that are under and outside of the cap)
- Group B: soil from 0 to 15 feet bgs, excluding locations under the cap (locations shown on Figure 2 that are outside of the cap)

The depth interval of 0 to 15 feet bgs represents a human exposure from ingestion of or dermal contact with soil, or inhalation of particulates or a volatile hazardous substance, in accordance with EPA Risk Assessment Guidance for Superfund (EPA, 1989) and 18 AAC 75.340(j)(2).

The exposure scenario reflects anticipated potential uses of the site. The current and future land use for SS090 is a parking area; therefore, the most plausible exposure scenario is an industrial worker. The industrial worker scenario assumes a worker could be exposed to soil through direct contact and ingestion. A hypothetical future residential scenario was evaluated to support future risk management decisions. The hypothetical future residential scenario assumes adult and child residents could also be exposed to soil through direct contact and ingestion. Potential exposure scenarios are shown on Figure 4.

Risks were evaluated by calculating soil exposure point concentrations (EPCs) for the Group A and Group B exposure areas (the 95 percent upper confidence limit on the mean concentration of the samples) and comparing them with the 18 AAC 75 ADEC human health cleanup level and EPA RSLs (see Table 2-3). EPCs are estimated concentrations of contaminants that a receptor might come in contact with.

For Group A, the dieldrin EPC for soil is above the ADEC human health cleanup level and EPA residential and industrial RSLs. However, the exposure assumptions for Group A (i.e., no cap) are not consistent with current site conditions. Direct contact risks are mitigated by the existing cap.

For Group B (maintenance of the cap), the dieldrin EPC for soil is well below the ADEC human health cleanup level and the EPA RSLs for residential and industrial direct exposure.

2.7.2 Environmental/Ecological Risks

Potential ecological risks were evaluated in accordance with 18 AAC 75.325 and the ADEC ecological risk guidance. Conditions at SS090 are considered protective based on the following:

- No visible staining of surface soils was observed at the site.
- No stunted vegetation was observed at the site.
- There is no significant surface water runoff or sediment transport from the site to surface water bodies. The nearest surface water bodies are Ship Creek, which is 1 mile south of the site, and Otter Lake, which is 2.7 miles northwest of the site. The majority of the site is covered by a raised bed or paved surfaces.
- Groundwater is not likely to cause a violation of the water quality standards in 18 AAC 70 for surface water or sediment. Groundwater at the site is not closely connected hydrologically to nearby surface water and does not discharge to surface water near the site.
- There is no petroleum hydrocarbon contamination in soil.
- All potentially complete ecological exposure pathways are considered insignificant because of the small size of the site, the site location within the community, and the presence of more optimal habitat nearby.

2.7.3 Basis for Action

The response action selected in this ROD is necessary to protect public health or welfare from actual or threatened releases of hazardous substances into the environment. Action for soil at

SS090 is necessary because it is contaminated with dieldrin at concentrations that pose a potential risk to current industrial workers and potential future residents.

2.8 Remedial Action Objective

The site-specific remedial action objective (RAO) for SS090 is to prevent human exposure to dieldrin in soil at concentrations above levels that allow for UU/UE.

This RAO is used along with site-specific applicable or relevant and appropriate requirements (ARARs) to help select a cleanup standard for soil.

The cleanup level for dieldrin in soil is 0.44 mg/kg, which is the 18 AAC 75 promulgated ADEC human health cleanup level (ADEC, 2016).

2.9 Description and Evaluation of Remedial Alternatives

This section presents the remedial alternatives considered to address dieldrin contamination in soil at SS090, which are summarized in Table 2-4 below.

- **Alternative 1 (No Further Action).** This alternative is required for consideration by the NCP to serve as a baseline against which other options are compared. No Further Action means that no further action will be taken to remediate or manage dieldrin in soil, and ICs would not be employed.
- **Alternative 2 (Maintenance of the Cap and ICs).** Capping and ICs will restrict human exposure to dieldrin in soil at concentrations above the cleanup level so that the potential exposure pathways (direct contact and ingestion) remain incomplete (see Figure 2). Maintenance of the cap (raised bed) built in 2008 as a part of the IRA during construction of the adjacent barracks and parking area includes performing annual inspections, repairing damage to the adjacent asphalt area, the cap, and maintaining the top soil and native grasses. It is estimated that maintenance of the top soil and native grasses will be required every 10 years, and the cap liner (two layers of HDPE and a layer of geotextile fabric) is anticipated to require replacement in 30 years.

ICs were implemented during the IRA and would continue in accordance with USAF Land Use Control Guidance. ICs are a legal or administrative process that restrict soil excavation and transport of materials offsite and are designed to prevent activities that could affect the performance of the cap, prevent or control human exposure to dieldrin in soil at SS090, and protect human health and the environment.

- **Alternative 3 (Excavation and Disposal).** Soil contaminated with dieldrin at concentrations above the cleanup level would be physically removed using conventional earthmoving equipment and standard construction practices, and disposed of offsite (out of state) to achieve UU/UE (see Figure 5). The excavated area would be subsequently backfilled and graded, and the adjacent paved parking area would be repaired, as needed. ICs and annual inspections would no longer be required for the site.

Approximately 1,800 cubic yards of soil within an approximately 1,600-square-foot area (the raised bed and soil beneath it) would be excavated. The vertical limits of excavation would be approximately 25 feet bgs. Excavating below a depth of 5 feet would require implementation of engineering controls such as shoring. Excavation and disposal would also include managing traffic noise, dust, and general nuisances to reduce impacts on workers and adjacent property (the barracks building).

Dieldrin in soil at concentrations below the cleanup level (0.44 mg/kg) and above the ADEC migration-to-groundwater cleanup level of 0.00457 mg/kg (also revised in 18 AAC 75, November 2016) would remain in soil within an approximately 4,400-square-foot area. USAF would be required to continue to manage movement of soil in accordance with ADEC regulations in 18 AAC 75.300 et al.

Table 2-4: Summary of Remedial Alternatives

Designation	Description
Alternative 1 – No Further Action	No further actions would be taken, and ICs would not be employed. No Further Action is presented as a baseline for comparative analysis.
Alternative 2 – Maintenance of the Cap and ICs	Consists of maintenance of the cap (raised bed) built in 2008 as a part of the IRA during construction of the adjacent barracks and parking area, and ICs. ICs restrict soil excavation and transport of materials offsite, prevent activities that could affect the performance of the cap, and prevent or control human exposure to dieldrin in soil. A CERCLA five-year review is required.
Alternative 3 – Excavation and Disposal	Soil contaminated with dieldrin at concentrations above the cleanup level would be physically removed and disposed of offsite to achieve UU/UE. ICs and annual inspections would no longer be required for the site.

2.9.1 Common Elements and Distinguishing Features

Compliance with the ADEC cleanup level of 0.44 mg/kg for dieldrin in soil is the only common element to the three alternatives. Under Alternative 1, no further actions would be taken; whereas under Alternative 2, maintenance of the cap built in 2008 as a part of the IRA would continue to be maintained and ICs would continue in perpetuity. Under Alternative 3, soil contaminated with dieldrin above the cleanup level would be physically removed using conventional earthmoving equipment and standard construction practices, and disposed of offsite (out of state) to achieve UU/UE.

Table 2-5 provides a summary of the elements of the alternatives.

Table 2-5: Common Elements and Distinguishing Features of Alternatives

Features	Alternative 1	Alternative 2 ^a	Alternative 3
Estimated time for design and construction	None	None	3 weeks
Estimated time to achieve RAOs	Not applicable	None	3 weeks
Estimated capital cost ^b	\$0	\$10,000	\$4,524,000
Estimated annual cost ^b	\$0	\$6,400	\$0

Table 2-5: Common Elements and Distinguishing Features of Alternatives

Features	Alternative 1	Alternative 2 ^a	Alternative 3
Estimated net present value	\$0	\$156,900	\$4,524,000
Protective of human health and the environment?	No	Yes	Yes

^a The cost to construct the cap was approximately \$10,000 in 2008. Costs to date for maintenance of the raised bed are approximately \$10,000.

^b Cost estimates are based on the best available information regarding the anticipated scope of the remedial alternatives. This is an order-of-magnitude engineering cost estimate that is expected to be within +50 to -30 percent of the actual project cost. NPV cost was calculated for a period of 30 years.

2.9.2 Expected Outcome

Table 2-6 provides a summary of the outcomes of each alternative.

Table 2-6: Expected Outcome of Each Alternative

Features	Alternative 1	Alternative 2	Alternative 3
Available uses of land	Not applicable	Commercial/Industrial	UU/UE
Estimated time for design and construction (months)	Not applicable	Not applicable	3 weeks
Estimated remediation timeframe (years)	Not applicable	Not applicable	3 weeks
Protective of human health and the environment (RAOs met)	No	Yes	Yes

2.10 Summary of Comparative Analysis of Alternatives

In accordance with the NCP, the alternatives for SS090 were evaluated using the nine criteria described in 40 CFR Section 300.430(e)(9)(iii) as cited in NCP Section 300.430(f)(5)(i). These nine criteria are classified as threshold criteria, balancing criteria, or modifying criteria.

Threshold criteria are standards that an alternative must meet to be eligible for selection as a remedial action. There is little flexibility in meeting the threshold criteria; the alternative must meet them or the alternative is unacceptable. The following are classified as threshold criteria:

- **Overall Protection of Human Health and the Environment** – addresses whether each alternative provides adequate protection of human health and the environmental and describes how risks posed through each exposure pathway are eliminated, reduced, or controlled through treatment, engineering controls, and/or institutional controls.
- **Compliance with, or an Applicable Waiver of, ARARs** – remedial actions at CERCLA sites must at least attain legally applicable or relevant and appropriate Federal and State requirements, standards, criteria, and limitations which are collectively referred to as “ARARs,” unless such ARARs are waived under CERCLA section 121(d)(4).

Balancing criteria weigh the tradeoffs between alternatives. These criteria represent the standards upon which the detailed evaluation and comparative analysis of alternatives are based. In general,

a high rating on one criterion can offset a low rating on another balancing criterion. Five of the nine criteria are considered balancing criteria:

- **Long-Term Effectiveness and Permanence** – the expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once cleanup levels have been met. This criterion includes the consideration of residual risk that will remain onsite following remediation and the adequacy and reliability of controls.
- **Reduction of Toxicity, Mobility, and Volume through Treatment** – the anticipated performance of the treatment technologies that may be included as part of a remedy.
- **Short-Term Effectiveness** – addresses the period of time needed to implement the remedy and any adverse impacts that may be posed to workers, the community, and the environment during construction and operation of the remedy until cleanup levels are achieved.
- **Implementability** – addresses the technical and administrative feasibility of a remedy from design through construction and operation. Factors such as availability of services and materials, administrative feasibility, and coordination with other governmental entities are also considered.
- **Cost** – the estimated present work costs for the alternatives, not including the No Action alternative, range from \$156,900 for Alternative 2 to \$4,524,000 for Alternative 3. The cost of each alternative increases as the degree of soil treatment increases. Cost summaries can be found in Table 2-5. Cost estimates are expected to be accurate within a range of +50 to -30 percent.

Modifying criteria include state/support agency and community acceptance of the selected remedy.

- **State Support /Agency Acceptance** – considers whether the EPA and the State agrees with the USAF's analyses and recommendations, as described in the investigation reports and Proposed Plan.
- **Community Acceptance** – considers whether the local community agrees with the USAF's analyses and preferred alternative. Comments received on the Proposed Plan are an important indicator of community acceptance.

The following sections summarize how well each alternative satisfies each evaluation criterion and indicates how an alternative compares with the other alternatives under consideration.

2.10.1 Overall Protection of Human Health and the Environment

Alternative 1 (No Further Action) does not satisfy this threshold criterion because there are no provisions to maintain the cap or limit land use, and concentrations of dieldrin in soil do not allow for UU/UE. Alternative 1 is not considered further in the evaluation of alternatives.

Alternatives 2 and 3 meet this threshold criterion and are protective of human health based on current land use (parking area). Alternative 2 restricts human exposure to dieldrin in soil left in place through maintenance of the cap and ICs. Alternative 3 is also protective of human health based on a potential hypothetical future use of the site (residential) through excavation and offsite disposal of soil.

2.10.2 Compliance with ARARs

ARARs are generally classified as chemical-specific, action-specific or location-specific. The ARARs applicable to this ROD include both chemical and action-specific ARARs.

Chemical Specific

EPA RSLs are not promulgated cleanup levels or cleanup standards under CERCLA but may be used to support the decision to undertake a remedial action. The State of Alaska Oil and Other Hazardous Substances Pollution Control Regulations (18 AAC 75.341) is an applicable requirement. Alternatives 2 and 3 will meet this ARAR. Alternative 2, which includes ICs, must also meet the following ARAR:

- **State of Alaska Oil and Other Hazardous Substances Pollution Control Regulations (18 AAC 75.375)** – Requirements for implementation and management of an IC, if necessary, to protect human health, safety, welfare, or the environment, or to maintain the integrity of site cleanup activities or improvements.

Alternative 3 must also meet the following ARAR:

- **EPA RCRA Hazardous Waste Determination (42 U.S.C. Section 6901 et seq.; 40 CFR Sections 261, 264, and 268)** – Characterization and management of wastes generated in accordance with RCRA requirements

Action Specific

- **EPA RCRA Closure Criteria (40 CFR 264.117(c), 310(a) and (b))** – RCRA performance standards for hazardous waste caps are an ARAR when hazardous waste disposal occurred onsite after waste regulation.

The cap design meets the RCRA criteria because it provides long-term minimization of migration of liquids via the 20-mil HDPE and geotextile fabric liners; functions with minimum maintenance; promotes drainage and minimizes erosion or abrasion of the cover via the significant top soil and vegetation cover; accommodates settling and subsidence so that the cover's integrity is maintained; and has a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

Alternative 3, which includes excavation and offsite disposal of soil, must also meet the following ARARs:

- **State of Alaska Oil and Other Hazardous Substances Pollution Control Regulations (18 AAC 50)** – Reasonable precautions to prevent particulate matter from becoming airborne during excavation activities.
- **State of Alaska Oil and Hazardous Substances Pollution Control and Offsite Disposal Regulations (ADEC 18 AAC 75.370; ADEC 18 AAC 75.365)** – Requirements for disposal of soil

2.10.3 Long-term Effectiveness and Permanence

Alternative 2 (Maintenance of the Cap and ICs) would effectively restrict access to soil so that the potential exposure pathway would remain incomplete. Alternative 2 will be effective as long as the cap is maintained and ICs remain in place. Alternative 3 (excavation and disposal) would remove soil contaminated with dieldrin from the site, thereby achieving UU/UE. Alternative 3 requires no maintenance or ICs to maintain protectiveness.

2.10.4 Reduction of Toxicity, Mobility, or Volume through Treatment

Neither Alternative 2 nor 3 propose treatment of contaminated soils. Alternatives 2 and 3 rely on administrative and engineering controls or physical removal of contaminated soil to achieve the RAO and prevent human exposure to dieldrin in soil, and do not reduce the toxicity, mobility, or volume of contaminated soil over time.

2.10.5 Short-term Effectiveness

Alternative 2 is ranked higher than Alternative 3 because the cap has already been constructed and ICs have been implemented. Traffic noise, dust, and general nuisances from maintenance, including annual inspections and repairs of the cap, can be easily managed with minimal risk to site workers and adjacent property. Alternatively, under Alternative 3, soil would have to be physically excavated and removed from the site, increasing short-term risks to site workers and increasing materials and energy use. The total remediation timeframe for Alternative 3 is estimated at approximately 3 weeks. Although Alternative 3 would effectively achieve UU/UE, excavation generates waste and the need to subsequently dispose of contaminated soil offsite in the lower 48 states, thus resulting in higher carbon emissions.

2.10.6 Implementability

Alternatives 2 and 3 are technically and administratively feasible. Alternative 2 has already been implemented. Although long-term management of the site would be required, it is expected to be minimal and easily implemented.

Alternative 3 is more difficult to implement because of the need to remove approximately 1,800 cubic yards of soil and dispose of it out of state (in the lower 48 states). In addition, portions of the parking area would be restricted from use during construction and would need to be repaired. Soil can be excavated using conventional and available equipment, and the target area and depth are achievable (25 feet bgs). However, because the depth of contamination is greater than 5 feet bgs, engineering controls such as shoring would also be required.

2.10.7 Cost

The estimated total cost for Alternative 2 is \$156,900 in comparison with \$4,524,000 for Alternative 3. Alternative 2 is a cost-effective alternative, represents the most reasonable value for the money, and is consistent with the current land use, which is not expected to change in the foreseeable future. The costs are proportional to the effectiveness of the remedy by achieving long-term effectiveness and permanence within a reasonable timeframe.

Alternative 3 would result in higher costs because of offsite (out of state) disposal of soil, and higher costs associated with excavation and engineering controls at deeper depths. Alternative 3 requires no future costs for maintenance, IC implementation, or five-year reviews. USAF would still be required to manage movement of soil in accordance with ADEC regulations in 18 AAC 75.325.

2.10.8 State Acceptance

In various meetings and reviews of SS090 documents, ADEC has noted its support of Alternatives 2 and 3. EPA has noted its support of Alternative 3.

2.10.9 Community Acceptance

No comments on the Proposed Plan or the preferred remedy for SS090 were received from the community during the public comment period.

2.11 Principal Threat Wastes

The NCP expects that treatment reducing the toxicity, mobility, or volume of the principal threat wastes will be used to the extent practicable. The principal threat concept refers to the source materials at a CERCLA site that are considered to be highly toxic or highly mobile, that generally cannot be reliably controlled in place, or that present a significant risk to human health and the environment should exposure occur. A source material is material that contains hazardous substances, pollutants, or contaminants that acts as a reservoir for migration of contamination to groundwater, surface water, or air, or that acts as a source for direct exposure. Dieldrin contamination at SS090 does not constitute a principal threat waste because dieldrin is not highly mobile, has been easily controlled in place within the raised bed, is not migrating to groundwater beneath SS090, no surface water is near the site, and direct exposure has been mitigated by the cap.

2.12 Selected Remedy

The selected remedy for SS090, Barracks Construction Dieldrin Spill Site, is Alternative 2 (Maintenance of the Cap and ICs).

2.12.1 Summary of the Rationale for the Selected Remedy

Based on information currently available, Alternative 2 was selected over the other alternatives because it meets the threshold criteria and provides the best balance of tradeoffs among the other alternatives with respect to the balancing and modifying criteria. Alternative 2 is the most cost-effective alternative, represents the most reasonable value for the money, and is consistent with the current land use, which is not expected to change in the foreseeable future.

2.12.2 Description of the Selected Remedy

The selected remedy consists of the following:

- Maintenance of the soil cap (45 feet in diameter by approximately 6 feet high), topped with a minimum of 3 inches of soil and vegetated for erosion control

- Maintenance of the asphalt parking lot within the land use control boundary
- Institutional controls (ICs)

The cap, constructed in 2008, consists of soil with low levels of dieldrin (below the migration to groundwater cleanup level) that was consolidated into an approximately 5- to 6-foot-high by 45-foot-wide circular mound and covered with two layers of HDPE, layer of geotextile fabric, and topped with approximately 3 inches of top soil, creating a raised bed (cap). The cap was constructed on top of an area with dieldrin in soil at concentrations above the human health cleanup level. The parking area immediately adjacent to the raised bed (as included in the LUC boundary shown on Figure 2), is also part of the capped remedy.

Land use restrictions—land use controls (LUCs), in the form of ICs, will restrict soil excavation and transport of materials. LUCs will remain in place until concentrations in soil allow for UU/UE. In accordance with USAF LUC guidance, LUCs are implemented as follows:

1. **Resource Uses and Risk Exposure Assumptions.** Due to the location of the site within and adjacent to a parking lot, the current and future land use at this site is designated as industrial use only. However, to assess the need for LUCs, contamination at the site was assessed for UU/UE residential use.
2. **Risks Necessitating the LUCs.** Residual soil contamination is not safe for residential use. LUCs are therefore necessary to preclude such uses and to control the disposition and use of any soil excavated from the site.
3. **Performance Objectives.** Land use restrictions—LUCs will maintain the integrity and performance of the cap; to prohibit the development and use of property for residential housing, elementary and secondary schools, child care facilities and playgrounds, or garden beds (flower or vegetable); and to prevent the use of contaminated soil for restricted uses in the event of excavation and implement the soils management plan.
4. **Location of LUCs.** The LUC boundary is shown on Figure 2.
5. **Duration of LUCs.** LUCs will be maintained until concentrations of dieldrin in soil allow for UU/UE.
6. **Description of Each LUC and How It Achieves a Specific LUC Performance Objective.** Bollards installed around the perimeter of the cap and the JBER dig permit system maintain the integrity of and prevent activities that could breach the cap. The JBER construction review process prevents ground-disturbing construction activities and ensures safe soil management procedures in areas with residual contamination (above the CUL of 0.44 mg/kg). The base dig permit system and base construction review process are implemented by the Base Civil Engineer Office (773d CES/CEOSC Office). All limitations and exposure restrictions were entered in the JBER master plan and GIS. A Notice of Environmental Contamination will be recorded with the appropriate Alaska Department of Natural Resources Recorder's Office and in USAF real estate records.

7. **General Performance Responsibility.** USAF is responsible for implementing, maintaining, monitoring, reporting, and enforcing LUCs.
8. **Specific Performance Responsibility to Bind Contractors and Tenants.** USAF shall inform, monitor, enforce, and bind, where appropriate, authorized lessees, tenants, contractors, and other authorized occupants of the site regarding the LUCs affecting the site.
9. **Specific Performance Responsibility for Transferring Sites.** Although USAF may later transfer these procedural responsibilities to another party by contract, property transfer agreement, or through other means, USAF shall retain ultimate responsibility for remedy integrity.
10. **Corrective Measures Requirement.** Any activity that is inconsistent with the LUC objectives or use restrictions, or any other action that may interfere with the effectiveness of the LUCs will be addressed by USAF as soon as practicable but in no case will the process be initiated later than ten days after the USAF becomes aware of the breach.
11. **Notification Requirement.** The USAF will notify EPA and ADEC as soon as practicable but no longer than ten days after discovery of any activity that is inconsistent with the LUC objectives or use restrictions, or any other action that may interfere with the effectiveness of the LUCs. The USAF will notify EPA and ADEC regarding how the USAF has addressed or will address the breach within 10 days of sending EPA and ADEC notification of the breach.
12. **Notification to EPA and the State Regarding Land Use Changes:** The USAF shall notify EPA and ADEC 90 days in advance of any proposed land use changes that are inconsistent with land use control objectives or the selected remedy.
13. **Notification of Transfers.** The USAF must provide notice to EPA and ADEC at least six (6) months prior to any transfer or sale of property containing land use controls so that EPA and ADEC can be involved in discussions to ensure that appropriate provisions are included in the transfer or conveyance documents to maintain effective land use controls. If it is not possible for the facility to notify EPA and ADEC at least six months prior to any transfer or sale, then the facility will notify EPA and the state as soon as possible but no later than 60 days prior to the transfer or sale of any property subject to land use controls. The USAF agrees to provide EPA and ADEC with such notice, within the same time frames, for federal to federal transfer of property accountability. The USAF shall provide either access to or a copy of the executed deed or transfer assembly to the EPA and ADEC.
14. **Concurrence Language.** JBER shall not modify or terminate LUCs, implementation actions, or land use that are associated with the selected remedy without the approval of EPA and the opportunity for concurrence by the State. JBER shall seek prior concurrence of EPA and the State before any anticipated action that may disrupt the effectiveness of the LUCs or any action that may alter or negate the need for LUCs.
15. **Monitoring and Reporting Language.** Monitoring of the environmental use restrictions and controls will be conducted annually by USAF. The monitoring results will be included in a report, and provided to the EPA and ADEC. The annual monitoring reports will be used in preparation of the Five Year Review to evaluate the effectiveness of the remedy.

The annual monitoring report, submitted to the regulatory agencies by USAF, will evaluate the status of the LUCs and how any LUC deficiencies or inconsistent uses have been addressed. The annual evaluation will address whether the use restrictions and controls referenced above were communicated in the deed(s), whether the owners and state and local agencies were notified of the use restrictions and controls affecting the property, and whether use of the property has conformed to such restrictions and controls.

16. Mechanism for Achieving LUC Performance Objectives: The internal procedures that JBER will use to implement the LUCs include but are not limited to the following:

- **Base Civil Engineer Work Clearance Requests** – One tool for achieving the LUC performance objectives is the Air Force Form 332 (AF332) or Base Civil Engineer Work Request. This form must be submitted and approved before the start of any construction project at JBER. One step in the approval process for this form is a comparison of the construction site with all constraints that are described in the Base General Plan. The AF332 serves as the document for communicating any construction constraints to the appropriate offices. Any constraints at the site result in the disapproval of the form unless the requester makes appropriate modifications to the construction plans.
- **JBER Dig Permits** – JBER also uses the Base Civil Engineer Work Clearance Request to enforce soil and sediment disturbance restrictions. The requester submits the Base Civil Engineer Work Clearance Request to the Base Civil Engineer Squadron for any project that involves mechanical soil or sediment excavation, such as trench digging for underground utilities or soil excavation for building foundations. If constraints involving soil disturbance or worker safety exist at the excavation area, the permit describes the appropriate procedures that workers must implement before the start of excavation to prevent unknowing exposure to contamination.
- **The Base Environmental Impact Analysis Process (EIAP)** – EIAP is conducted pursuant to the National Environmental Policy Act, as promulgated for the USAF in 32 CFR 989, to assess the potential environmental impact of any federal action initiated by or involving JBER. An Air Force Form 813 (AF813) initiates the EIAP. Both AF332s and excavation permits are subject to an evaluation under the EIAP. The proponent of a proposed action is required to submit the AF332 or excavation permit with AF813 so that the appropriate environmental analysis of the proposed action and alternatives to the proposed action is accomplished prior to any construction or excavation activities. The EIAP works to ensure proposed construction and excavation sites take into account the constraints that are described in the Base General Plan and known to the AFCEC Environmental Restoration Installation Support Team. The EIAP also ensures that all environmental factors, such as LUCs, are considered in the selection of locations for construction projects.
- **JBER General Plan** – The Base General Plan is a long-range planning tool that designates current and future land uses. It also provides a framework for selecting the locations of future facilities needed to carry out the Base mission. The Base General Plan describes the specific LUCs for each site, the reasons for the controls, and the areas where the controls are applied. For a LUC to remain protective, base personnel must have access to

information concerning its existence, purpose, and maintenance requirements. The Base General Plan provides the important information to ensure that LUC management takes place and that the LUC presence is effectively communicated.

The Air Force will notify EPA in advance of any changes to internal procedures associated with the selected remedy that might affect the LUCs.

Maintenance of the cap will include performing annual inspections, repairing damage to the raised bed and asphalt, and maintaining 3 inches of the top soil, native grasses, HDPE, and geotextile fabric, as needed. ICs, implemented during the IRA will continue to restrict soil excavation and transport of materials offsite, prevent activities that could affect the performance of the cap, and prevent or control human exposure to dieldrin in soil at SS090.

Changes to the remedy as described in this ROD, if they occur, will be documented using a technical memorandum in the Administrative Record, an Explanation of Significant Differences (ESD), or ROD amendment.

2.12.3 Summary of Estimated Remedy Costs

Costs associated with implementing the selected remedy are summarized in Table 2-5. The estimated total capital cost for the selected remedy is \$10,000. The estimated net present value cost is \$156,900, including estimated annual operation and maintenance costs of \$6,400.

2.12.4 Expected Outcomes of the Selected Remedy

The selected remedy will provide for long-term protectiveness and is consistent with current and reasonably anticipated future land use (industrial). SS090 will continue to be a raised vegetated bed and parking area. Maintenance of the cap will continue, as needed. ICs will continue to restrict soil excavation and transport of materials offsite, prevent activities that could affect the performance of the cap, and prevent or control human exposure to dieldrin in soil.

2.12.5 Statutory Determinations

Under CERCLA Section 121 (as required by NCP Section 300.430(f)(5)(ii)), the lead agency must select a remedy that is protective of human health and the environment, complies with ARARs, is cost effective, and uses permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In addition, five-year reviews are required if, after the remedy, hazardous substances will remain in place at concentrations greater than levels allowing for UU/UE. CERCLA also includes (1) a preference for remedies that employ treatment that permanently and significantly reduces the volume, toxicity, or mobility of hazardous wastes as a principal element, and (2) a bias against offsite disposal of untreated wastes.

The following discusses how the selected remedy meets these statutory requirements:

- **Protection of Human Health and the Environment** – The remedy will protect human health and the environment through restricting human exposure to dieldrin in soil by maintenance of the existing cap and continued implementation of ICs. There is no evidence that dieldrin has migrated through the subsurface soils to reach the groundwater. Groundwater is beneath a clay

confining unit at approximately 60 feet bgs, and dieldrin was not detected in groundwater sampled from 3 monitoring wells installed in 2013.

- **Compliance with ARARs** – The selected remedy will comply with ARARs identified for the remedy including 18 AAC 75.341, 18 AAC 75.375, and 40 CFR 264.117(c), 310(a) and (b) (as discussed in Section 2.10.2)) and will meet the cleanup level established herein.
- **Cost Effectiveness** – The selected remedy is cost effective, represents the most reasonable value for the money, and is consistent with the current land use, which is not expected to change in the foreseeable future. The costs are proportional to the effectiveness of the remedy by achieving long-term effectiveness and permanence within a reasonable timeframe.
- **Use of Permanent Solutions and Alternative Treatment Technologies or Resource Recovery Technologies to the Maximum Extent Practicable** – The selected remedy includes administrative and engineering controls to prevent human exposure to dieldrin in soil. The remedy does not include treatment to reduce the toxicity, mobility, or volume of contaminated soil over time.
- **Preference for Treatment as a Principal Element** – The soil will remain beneath the existing cap, and no additional treatment of the soil will occur. Therefore, the statutory preference for treatment as a principal element will not be met. While the selected remedy does not fully address the preference for treatment that permanently and significantly reduces the volume, toxicity, or mobility of hazardous wastes as a principle element, none of the alternatives include treatment of soil, and the immediate or future need for active remediation at the site is not warranted for the following reasons:
 - The site is located in a parking area near an intersection, and current land use is not expected to change in the foreseeable future.
 - Dieldrin in soil is not migrating to groundwater.
 - Treatment (as included in Alternative 3) is not cost effective.
- **Five-Year Review Requirements** – Because this remedy results in hazardous substances remaining onsite at concentrations greater than levels that allow for UU/UE, a CERCLA five-year review is required for this remedial action to make sure the remedy is functioning as intended and is protective of human health and the environment.

2.13 Documentation of Significant Changes

The Proposed Plan was made available to the public for review on July 20, 2016, with a public comment period that ended on August 30, 2016. On November 6, 2016, revisions to the State of Alaska Oil and Other Hazardous Substances Pollution Control Regulations (18 AAC 75.375) took effect, which includes revised cleanup levels for dieldrin in soil. The previous soil direct contact cleanup level of 0.32 mg/kg (2008) referred to in the Proposed Plan and previous investigation documents, was changed to a human health cleanup level of 0.44 mg/kg. The migration to groundwater cleanup level of 0.0076 mg/kg (2008), also referred to in the Proposed Plan and previous investigation documents, was changed to 0.00457 mg/kg. Therefore, the cleanup level

presented in this ROD for dieldrin in soil at SS090 is 0.44 mg/kg, the 2016 human health cleanup level rather than 0.32 mg/kg presented in the Proposed Plan. Although the cleanup level has changed, the change does not result in changes to the alternatives presented or the selected remedy.

3.0 RESPONSIVENESS SUMMARY

This section provides a summary of the significant public comments received during the public comment period for the Proposed Plan for SS090 and includes the USAF response to public comments. At the time of the public comment period, the USAF had selected Alternative 2 (Maintenance of the Cap and ICs) as its preferred alternative under CERCLA for SS090 on JBER, Alaska.

JBER did not receive any comments in writing regarding the Proposed Plan (USAF, 2016) or the preferred alternative described therein.

3.1 Stakeholder Comments and Lead Agency Responses

None received.

3.2 Technical and Legal Issues

None.

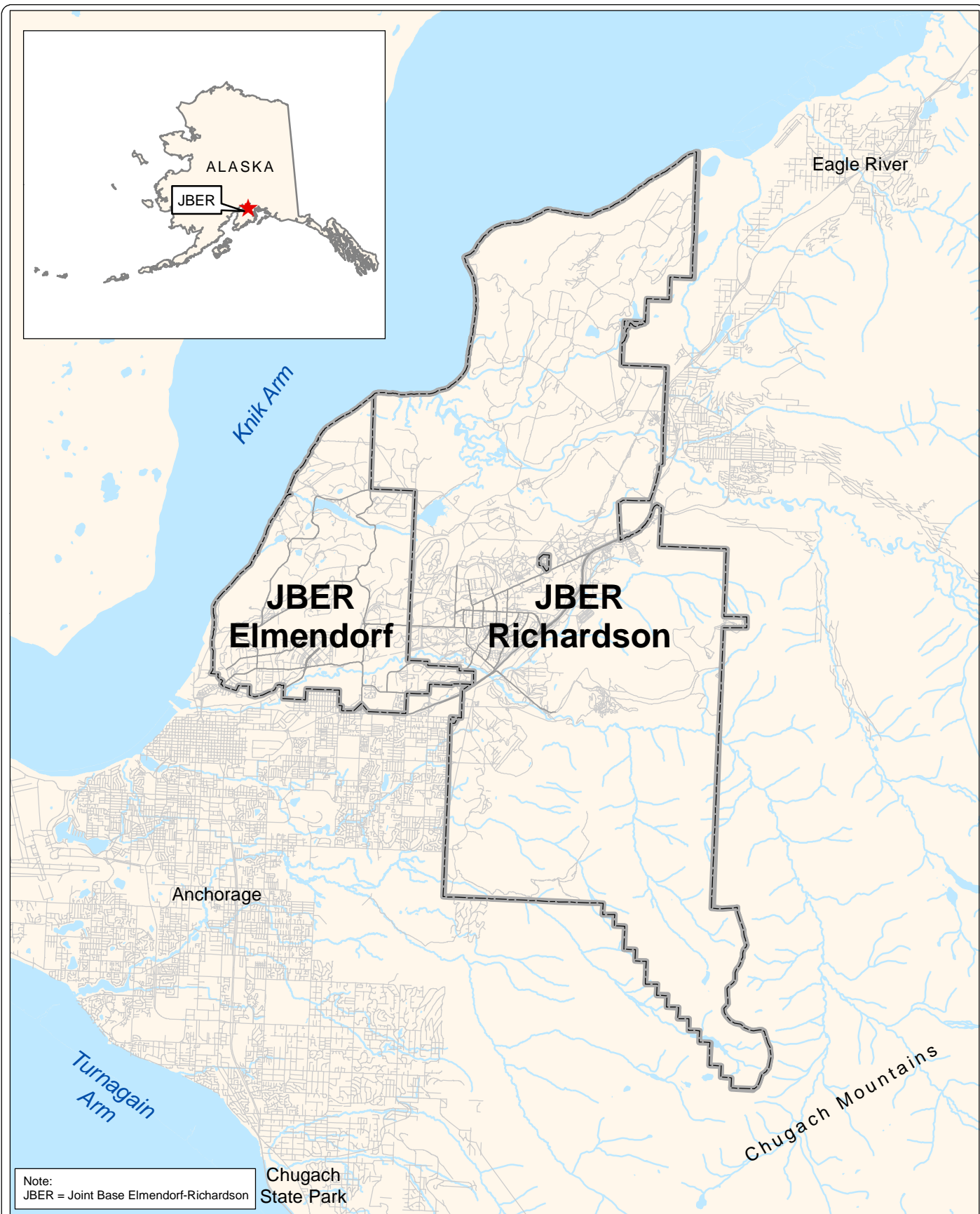
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4.0 REFERENCES

- Alaska Department of Environmental Conservation (ADEC). 2016. *Title 18 Alaska Administrative Code Chapter 75. Oil and Other Hazardous Substances Pollution Control*. Revised November.
- United States Air Force (USAF). 2016. *Proposed Plan for SS090 – Barracks Construction Dieldrin Spill Site, Joint Base Elmendorf-Richardson, Alaska*. Final. July.
- United States Air Force (USAF). 2015. *Interim Remedial Action Summary Report, SS090 – Barracks Construction Dieldrin Spill Site, Joint Base Elmendorf-Richardson, Alaska*. Final. October.
- United States Air Force (USAF). 2014. *Preliminary Source Evaluation 2 Report, SS090 – Barracks Construction Dieldrin Spill Site, Joint Base Elmendorf-Richardson, Alaska*. Final. December.
- United States Air Force (USAF). 2011. *Joint Base Elmendorf-Richardson Community Involvement Plan*. September.
- United States Army Corps of Engineers (USACE). 2012. *Report of Chemical Findings, FTR251 Brigade Combat Team (Light), Fort Richardson, Alaska (12-019)*. January 24.
- United States Army Corps of Engineers, Alaska District (USACE). 2008. *Results of Soil Analysis at FTR-243*. Memorandum from Dick Nenablo to Bill Adams/EPA and Louis Howard/ADEC. Final. July.
- United States Department of Defense (DOD). 1994. *DoD Federal Facility Agreement under CERCLA Section 10, administrative Docket 1093-05-029-120, United States Department of the Army Fort Richardson, Alaska*. December.
- United States Environmental Protection Agency (EPA). 2015. *Regional Screening Levels*. <http://www.epa.gov/risk/regional-screening-table>. November.
- United States Environmental Protection Agency (EPA). 1989. *Risk Assessment Guidance for Superfund*.

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Figures



JOINT BASE ELMENDORF- RICHARDSON LOCATION MAP

Figure
1a



SITE LOCATION

Figure

1b

SS090, Barracks Construction Dieldrin Site
Joint Base Elmendorf-Richardson, Alaska

NOTES:

1. Features digitized from Not-To-Scale elements.
2. Coordinate System: UTM Zone 6, WGS84, meters.
3. Previous features digitized from CH2M HILL, Mar. 2004 (Figure 1-2) and EMCON, Jan. 1999 (Figure 2)
4. ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
Bold - Exceedance of cleanup level
* = Exceedance of ADEC Under 40-inch Zone Human Health Soil Cleanup Level (currently 0.44 mg/kg)
5. Group A includes all soil sample locations shown.
Group B includes all soil sample locations shown except those within the blue cap boundary.

Regional Direction of Groundwater Flow

B-5
2007

Depth ft bgs	Dieldrin mg/kg
0-3'	0.5*
3-6'	0.48*

SS090-MW02
B16

B15

B13

SS090-MW01

AP-5075

B-2
2007

Depth ft bgs	Dieldrin mg/kg
0-3'	1.5*
3-6'	1.7*

AP-5076
2005

Depth ft bgs	Dieldrin mg/kg
0-4'	1.32*

B-4
2007

Depth ft bgs	Dieldrin mg/kg
0-3'	1.3*

B7

B-6
2008

Depth ft bgs	Dieldrin mg/kg
0-3'	1.04*
3-6'	1.5*
6-9'	0.549*
12-16'	0.0158
16-20'	0.144

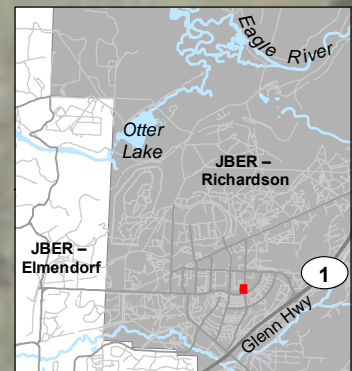
SS090-MW03

LEGEND

- Monitoring Well
- Soil Sample Above ADEC Human Health Cleanup Level (0.44 mg/kg)
- Soil Below ADEC MGTW Cleanup Level (0.00457 mg/kg)
- Soil Sample Above ADEC MGTW Cleanup Level and Below ADEC Human Health Cleanup Level
- Cap
- Building (Facility ID)
- Soil Land Use Control Boundary

0 12.5 25 50 75 Feet

Aero-Metric Image, Copyright © 2009

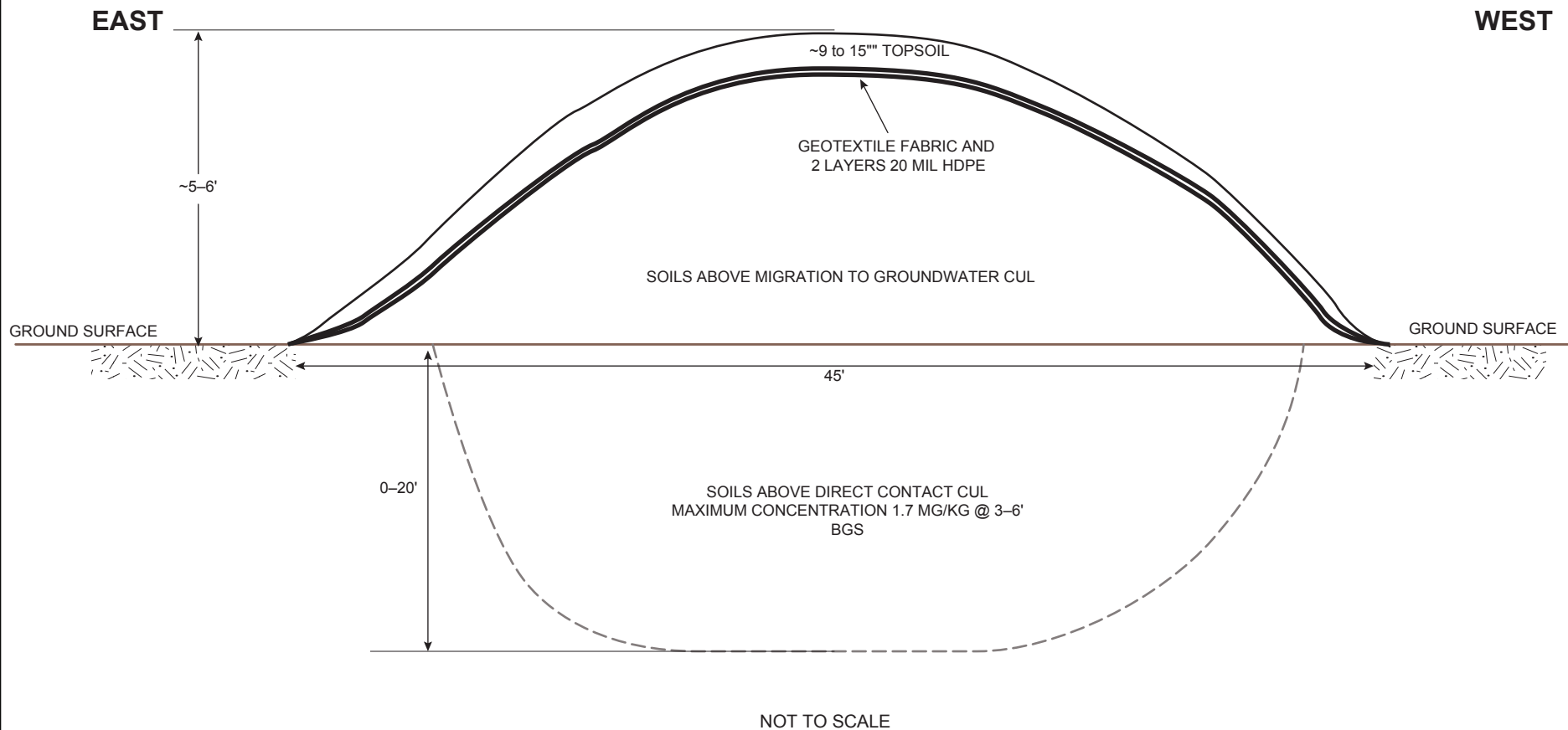


**ALTERNATIVE 2
MAINTENANCE OF THE CAP AND ICS**

Figure

2

SS090, Barracks Construction Dieldrin Site
Joint Base Elmendorf-Richardson, Alaska



LEGEND

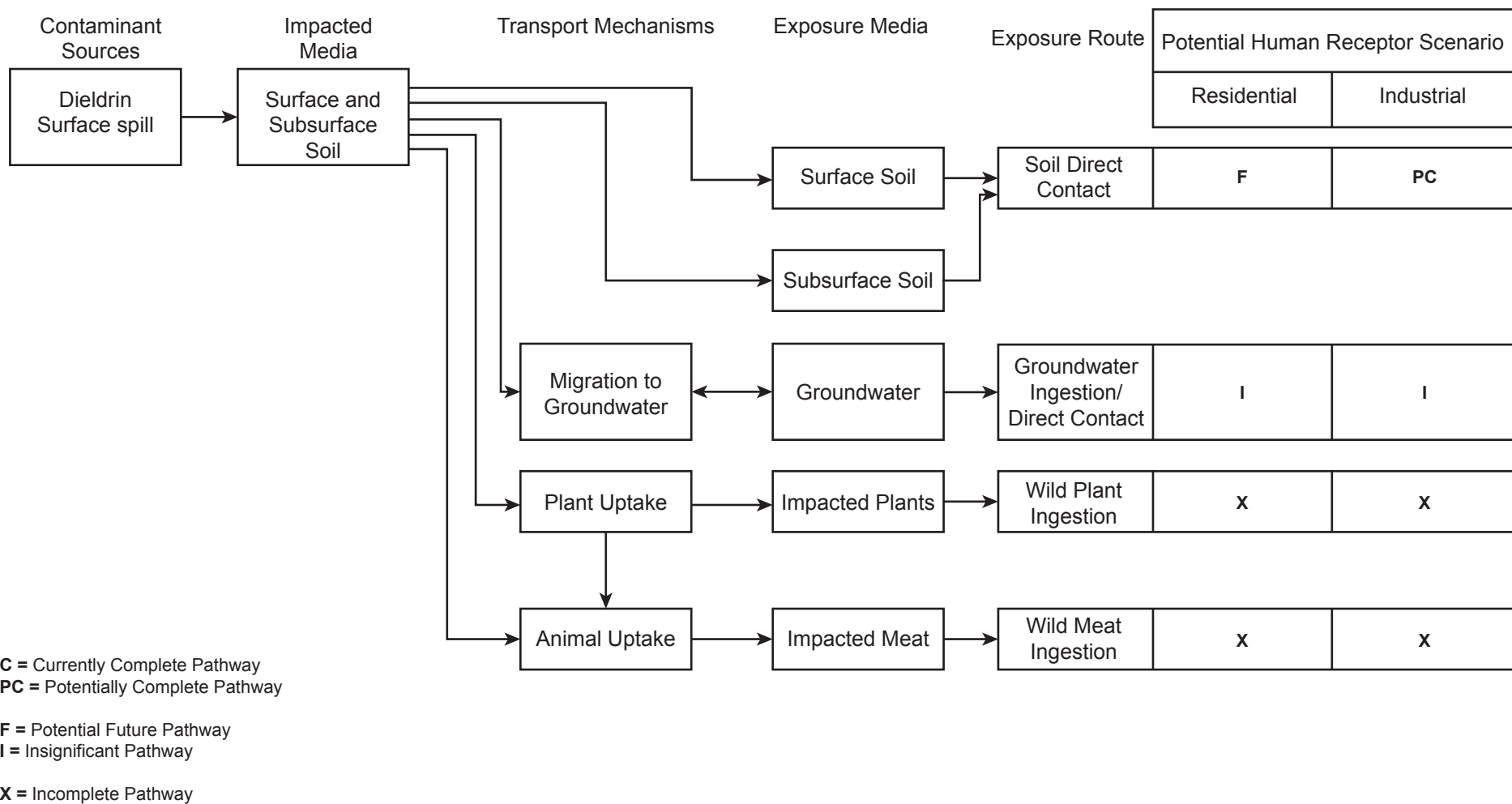
CUL = cleanup level
 ADEC Migration to Groundwater CUL = 0.00457 mg/kg
 ADEC Direct Contact CUL = 0.44mg/kg
 Note: Based on personal communication, the 20 MIL HDPE liner may also be located at ground surface, underneath the mound.



RAISED BED CROSS SECTION

SS090 – Barracks Construction Dieldrin Site
 Joint Base Elmendorf-Richardson, Alaska

**Figure
3**



POTENTIAL EXPOSURE SCENARIOS

Figure

4

Joint Base Elmendorf-Richardson, Alaska



NOTES:

1. Features digitized from Not-To-Scale elements.
2. Coordinate System: UTM Zone 6, WGS84, meters.
3. Previous features digitized from CH2M HILL, Mar. 2004 (Figure 1-2) and EMCON, Jan. 1999 (Figure 2)
4. ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
Bold - Exceedance of cleanup level
* = Exceedance of ADEC Under 40-inch Zone Human Health Soil Cleanup Level (currently 0.44 mg/kg)
Locations in gray are ND for dieldrin (method reporting limit for dieldrin = 0.00025 ug/L)
ND = not detected above method reporting limit

Regional Direction of Groundwater Flow

B-5
2007

Depth ft bgs	Dieldrin mg/kg
0-3'	0.5*
3-6'	0.48*

SS090-MW02
B16

B15

B13

SS090-MW01

AP-5075

Approximate
Excavation Area

B-6
2008

Depth ft bgs	Dieldrin mg/kg
0-3'	1.04*
3-6'	1.5*
6-9'	0.549*
12-16'	0.0158
16-20'	0.144

B-2
2007

Depth ft bgs	Dieldrin mg/kg
0-3'	1.5*
3-6'	1.7*

AP-5076
2005

Depth ft bgs	Dieldrin mg/kg
0-4'	1.32*

B-4
2007

Depth ft bgs	Dieldrin mg/kg
0-3'	1.3*

B7

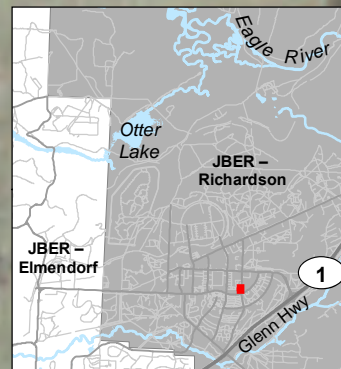
SS090-MW03

LEGEND

- Monitoring Well
- Soil Sample Above ADEC Human Health Cleanup Level (0.44 mg/kg)
- Soil Below ADEC MGTW Cleanup Level (0.00457 mg/kg)
- Soil Sample Above ADEC MGTW Cleanup Level and Below ADEC Human Health Cleanup Level
- Cap
- Site Boundary
- Building (Facility ID)

0 12.5 25 50 75 Feet

Aero-Metric Image, Copyright © 2009



**ALTERNATIVE 3
EXCAVATION AND DISPOSAL**

Figure

5

SS090, Barracks Construction Dieldrin Site
Joint Base Elmendorf-Richardson, Alaska

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Appendix A
Notice of Availability

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Notice of Availability

**The U.S. Air Force announces the availability of
the Proposed Plan for SS090 – Barracks
Construction Dieldrin Spill Site, Joint Base
Elmendorf-Richardson (JBER), Alaska**

SS090 is the location of a former surface spill of dieldrin (a pesticide) to soil. The July 2016 Proposed Plan summarizes previous investigations and interim environmental response actions and presents the preferred alternative for site cleanup. In accordance with the federal Comprehensive Environmental Response, Compensation and Liability Act and with oversight by the U.S. Environmental Protection Agency and Alaska Department of Environmental Conservation, the Air Force capped soil and implemented institutional controls for soil. The cap covers dieldrin in soil at concentrations above the applicable cleanup level (0.32 milligrams per kilogram) and covers an area of approximately 4,400 square feet within a parking lot. The preferred alternative (Maintenance of the Cap and Institutional Controls) is protective of human health and the environment. The Proposed Plan and other site related documents are available to the public at:

**Alaska Resources Library and
Information Services (ARLIS)
3211 Providence Road
Anchorage, AK 99508**

And online at <http://afcec.publicadmin-record.us.af.mil/Search.aspx> (filed under Fort Richardson).

The U.S. Air Force will accept written comments on the Proposed Plan during the public comment period from August 1 and August 30, 2016. Comments and questions can be submitted to JBER Public Affairs Office at (907) 552-8151 or jber.pa.3@us.af.mil.

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The Matanuska-Susitna Borough is soliciting bids from qualified contractors to provide labor, equipment and material to reconstruct approximately 4,325 linear feet of West Hazel Avenue off of Knik Goose Bay Road in Wasilla, Alaska. This project will upgrade the existing gravel roadways to MSB residential street standards. This work will involve, but is not limited to, clearing and grubbing, 5,752 CY of Unclassified Excavation, 10,335 CY of Borrow, Type B, and 1,435 CY of Aggregate Base Surface, Grading E-1. Additional items include drainage improvements, topsoil and seeding.

Bid documents are available July 20, 2016 in the Purchasing Division, Matanuska-Susitna Borough, 350 E. Dahlia Ave., Palmer, AK 99645. For information: (907) 861-8601. Facsimile: (907) 861-8617, e-mail: purchasing@matsugov.us. This bid document may be available on the internet at www.matsugov.us. A document fee of \$10.00 will be charged for materials picked-up and \$15.00 for materials mailed.

Bids open: August 10, 2016 @ 3PM in the Purchasing Division

Bids must be received in the Purchasing Division prior to the time fixed for opening of the bids to be considered. Time of receipt will be determined by the time stamp in the Purchasing Division.

Persons needing accommodation in order to participate should contact the borough ADA coordinator at (907) 861-8687.

The Matanuska-Susitna Borough reserves the right to accept or reject any or all bids, waive any and all technicalities or informalities it deems appropriate. Award of this project is subject to the availability of funding.

Published: July 20, 2016

Mat-Su Health Foundation is requesting proposals from firms interested in conducting a detox feasibility study. Request for Proposal can be found at www.healthymatsu.org. Qualified, interested parties must submit a completed proposal electronically by 12:00 pm Alaska Time, August 1, 2016 to rmichaelson@healthymatsu.org

Published: July 12 - 31, 2016

The Rate Development & Tariff Committee of the Alaska Exchange Carriers Association will conduct a meeting Thursday, July 21, 2016 at 9:00 am at 12350 Industry Way, Suite 200, Anchorage, AK 99515.

Published: July 20 & 21, 2016

Notice To Creditors 302

IN THE SUPERIOR COURT
FOR THE STATE OF ALASKA
THIRD JUDICIAL DISTRICT
AT ANCHORAGE
PROBATE DEPARTMENT

In the Matter of the Estate of,
WILLIAM DAVID RUSK,
Deceased.

Case No. 3AN-16-1486 PR

NOTICE TO CREDITORS [A.S. 13.16.450]

To the creditors of the above-entitled estate:

Notice is hereby given that Denise K. Hopkins has been appointed personal representative of the above-named estate. All persons having claims against the decedent are required to present their claims within four months after the date of the first publication of this notice or said claims will be forever barred.

Dated: 7-18-16

/s/
John Morrison
Executive Director

7/18/2016
Date

Published: July 20, 2016



Notice of Availability

The U.S. Air Force announces the availability of the Proposed Plan for SS090 - Barracks Construction Dieldrin Spill Site, Joint Base Elmendorf-Richardson (JBER), Alaska

SS090 is the location of a former surface spill of dieldrin (a pesticide) to soil. The July 2016 Proposed Plan summarizes previous investigations and interim environmental response actions and presents the preferred alternative for site cleanup. In accordance with the federal Comprehensive Environmental Response, Compensation and Liability Act and with oversight by the US Environmental Protection Agency and Alaska Department of Environmental Conservation, the Air Force capped soil and implemented institutional controls for soil. The cap covers dieldrin in soil at concentrations above the applicable cleanup level (0.32 milligrams per kilogram) and covers an area of approximately 4,400 square feet within a parking lot. The preferred alternative (Maintenance of the Cap and Institutional Controls) is protective of human health and the environment. The Proposed Plan and other site related documents are available to the public at:

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The U.S. Air Force will accept written comments on the Proposed Plan during the public comment period from August 1 and August 30, 2016. Comments and questions can be submitted to JBER Public Affairs Office at (907) 552-8151 or jber.pa.3@us.af.mil.

Published: July 20, 2016

BEST STORAGE

A public auction will be held at Best Storage Dowling, July 30, 2016 at 11 a.m. at 1524 E Dowling, Anchorage, AK 99507.

Units to be sold:

NAME	UNIT	AMOUNT
Kimberly Beebe	A85X	\$ 523.00
George Kittson	E16	1830.80
Shane Young	A11	1876.43
George Crowell	B36	848.80
Anthony Randall	B11	525.20
Sulay Segura	I2	621.20
Tracey Bulalich	I25	670.60
Julla Haworth	B15	549.20
Brandon Thompson	F18	1204.20
Seth Hanniman	C7	1047.55
Brian Wetmore	D15	1394.00
Marilyn Oktoyak	A86	280.20
Marilyn Oktoyak	A92	272.30
Dan Ray	B1	528.40

Published: July 20, 23 & 30, 2016

RFP 16-AUDIT-01 FINANCIAL AUDIT SERVICES

The Native Village of Shungnak is seeking proposals from qualified individuals and firms to provide financial audit services for fiscal year 2014.

Proposals will be accepted until 4:30 P.M., July 26, 2016 at the office of Northwest Inupiat Housing Authority, on behalf of the Native Village of Shungnak. For a complete copy of the RFP, please contact:

Northwest Inupiat Housing Authority
Attn: Daniel Henry
P.O. Box 331
Kotzebue, Alaska 99752

DEHENRY@NWIHA.COM
(907) 442-3450

The Native Village of Shungnak

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so you can be the first in line for
a better salary, a new challenge

Knik Intermediate All-Stars drop first game of West Re

Up next are games vs. No. California, So. California and Central Maui



PHOTOS BY NORMA GONZALEZ OF NOGALES INTERNATIONAL SPORTS FOR THE STAR
 ABOVE: Issac Larkin of the Knik Intermediate All-Stars takes a cut against Arizona Copper Hills in the first game of the West Region of the Little League World Series. TOP RIGHT: A parade for the eight teams took place in Nogales, Ariz., before the tournament. BOTTOM RIGHT: A healthy contingent of local fans made the trek south.



Notice of Availability

The U.S. Air Force announces the availability of the Proposed Plan for SS090 – Barracks Construction Dieldrin Spill Site, Joint Base Elmendorf-Richardson (JBER), Alaska

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By Suzanne Ashe
 Chugiak-Eagle-River Star

The Knik Little League team Eagle River's Intermediate State Champions traveled to Nogales, Ariz., last weekend to play in the West Region of the Little League World Series.

The weeklong event kicked off with a parade for the eight teams participating: Alaska, Arizona, Northern California, Southern California, Hawaii, Nevada, Oregon and Washington, and Nogales as the host team. The Alaska team is ranked 19th in the league.

The first game on Monday against the Arizona Copper Hills brought a disappointing 14-3 loss with just four hits by Knik. Micah Cassezza went 1 for 2 with a two-run triple and a run scored.

The triple scored Orazio Ramos and Samuel Thompson to key a three-run inning to cut the Arizona lead to 7-3 in the fifth after Cassezza scored on a passed ball, but Copper Hills answered back with seven runs in the sixth to put the game away.

Knik played Northern California Canyon Creek on Wednesday at 6:30 p.m. Alaska Time and plays Southern California Metropolitan on Thursday, also at 6:30 p.m. local time, and

Central Maui on Friday at 4 p.m. The West Regional winner the Intermediate 50/70 won in Livermore, Calif.

On Tuesday The Star spoke with moms Julianna Nevells and Anna the players were enjoying an afternoon at a nearby lake.

"Their morale is really high and having great time. Their energy is they are making friends, especially the Washington group," Nevell said.

Bull echoed the sentiment saying the team was enjoying the moment together as a unified team. Their one parent from each of the Alaska teams also relatives who live down south in for the games, they said.

The trip to Arizona is being funded by the team's sponsors, and the parents are responsible for paying for the trip costs.

A GoFundMe page was set up to help offset some of the costs. The team is hoping to raise \$15,000. gofundme.com/2016knikallstars For updates on the games check out llbbws/intermediate5070/west.htm.

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Notice of Availability

The U.S. Air Force announces the availability of the Proposed Plan for SS090 – Barracks Construction Dieldrin Spill Site, Joint Base Elmendorf-Richardson (JBER), Alaska

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